

Brookhaven National Laboratory/National Synchrotron Light Source			
Subject:	SDL Laser Interlock Test LOTO		
Number:	LS-ESH-0049	Revision:	A
		Effective:	9/17/07
			Page 1 of 2
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*Approval signatures on file with master copy.

[Revision Log](#)

Purpose: The Ti-Sapphire shutter and YAG laser enclosure need to be safeguarded when performing laser interlock tests for the main laser hutch, LINAC, and End Station Laser Area.

Scope: This procedure is applicable for laser protection purposes for laser hutch, LINAC, and End Station Laser Area interlock testing. Utilizing this procedure will permit the Ti-Sapphire and YAG power supplies to remain ON. The NSLS Safety Officer, Safety Engineer, Interlock Engineer, Quality Manager, and SDL Laser Operator are the only personnel authorized to carryout this procedure.

Procedure:

LOTO Application:

1. A laser operator must be present to assist with the application of LOTO devices.
2. Obtain 2 padlocks, 2 Hold tags, and 2 cable-ties.
3. Request the laser operator to close the Ti-Sapphire shutter.
4. Request the laser operator to position the lockout bar over the Ti-Sapphire internal shutter. (Refer to [fig. 1](#)). Assure the shutter lever is captured in the cross bar and the posts are positioned correctly.
5. Apply a Lock and Tag to the Ti-Sapphire shutter LOTO Device (refer to [fig. 1](#))
6. The laser operator must position a Beam Dump inside the Laser Enclosure. Assure all enclosure openings are covered.
7. Place the cover on top of the enclosure.
8. Insert cross bar between the upstream and downstream posts. (refer to [fig. 2](#) & [3](#))
9. Apply a Lock and Tag to the upstream post. (refer to [fig. 4](#))
10. Make appropriate entries in SDL LOTO Log.

LOTO Removal:

1. Assure all testing is completed.
2. Request Laser Operator to assist with the removal of Locks and Tags on LOTO devices.
3. Make appropriate entries in SDL LOTO Log.

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Appendix A:

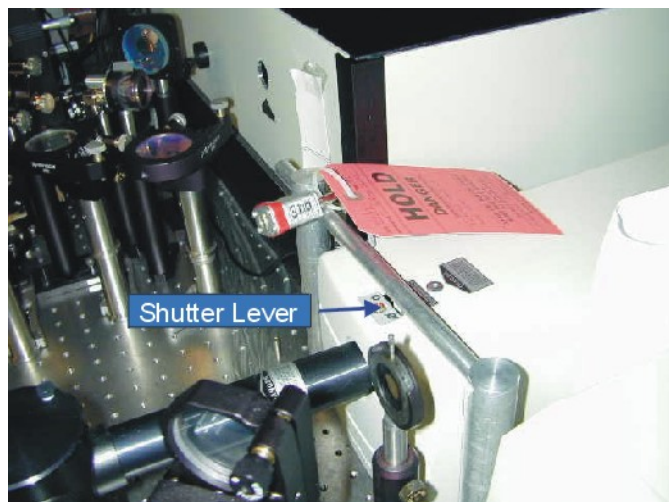


Figure 1: Ti-Sapphire shutter with LOTO device



Figure 2: Laser Enclosure (Upstream Post)

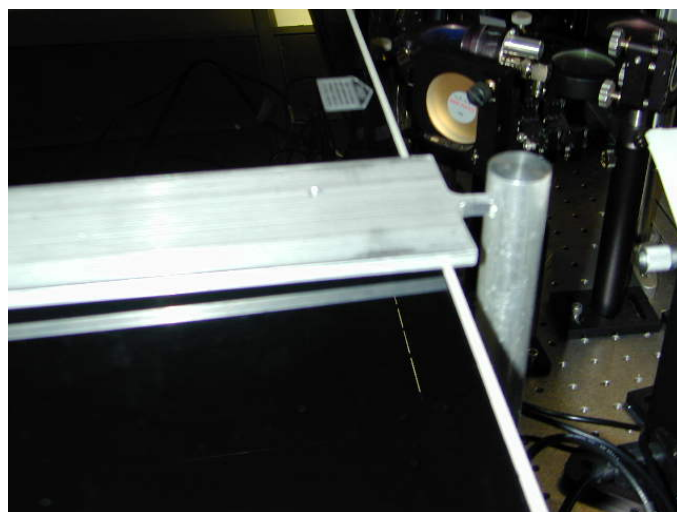


Figure 3: SDL Laser Enclosure

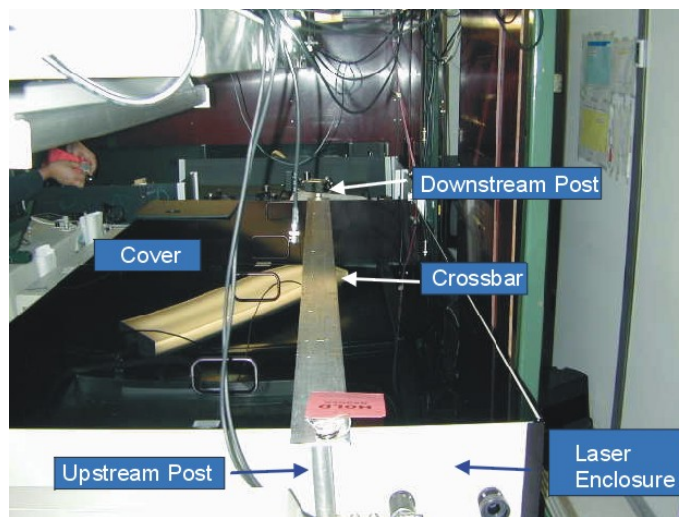


Figure 4: Laser Enclosure (Downstream Post)

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